

[illegible]

1                    2.     The XDSL system of claim 1 further comprising a  
2     controller for producing said control signal as a function of a performance  
3     characteristic associated with each of said impedance circuits.

4. The XDSL system of claim 1 wherein one of said plurality of impedance circuits has an impedance value equal to a characteristic line impedance of said transmission line without a bridged tap.

1                   6.       The XDSL system of claim 2 wherein said performance  
2   characteristic is a data transmission rate and said control signal  
3   corresponds to the respective impedance circuit associated with the highest

4 data transmission rate value.

1 7. A method of configuring an XDSL system comprising:  
2 providing a hybrid circuit in-line with a transmission line and  
3 an XDSL modem associated with a subscriber premises, said hybrid circuit  
4 comprising a plurality of selectable impedance circuits; and  
5 engaging one of said plurality of selectable impedance  
6 circuits in-line with said transmission line and said XDSL modem in  
7 response to a control signal.

1 8. The method of claim 7 wherein the step of engaging  
2 includes the step of engaging serially each of said plurality of impedance  
3 circuits in-line with said transmission line and said XDSL modem.

1 9. The method of claim 8 further comprising the step of  
2 determining a performance characteristic of said XDSL system for each of  
3 said plurality of impedance circuits when engaged, and outputting said  
4 control signal as a function of each of said performance characteristics.

1 10. The method of claim 9 wherein said performance  
2 characteristic is a data transmission rate and said control signal  
3 corresponds to the respective impedance circuit associated with the highest  
4 data rate.

1 11. The method of claim 9 wherein said performance  
2 characteristic is a data transmission rate and said control signal  
3 corresponds to a first respective impedance circuit associated with a data  
4 rate greater than a selected rate.

1                   12. The method of claim 9 wherein the step of outputting  
2 includes the step of comparing each of said performance characteristics  
3 associated with each respective impedance circuit.

1                   13. The method of claim 7 wherein one of said plurality of  
2 impedance values is equal to a characteristic line impedance of said  
3 transmission line without a bridged tap.

1                   14. The method of claim 13 wherein one of said plurality  
2 of impedance values is equal to a characteristic line impedance with a  
3 bridged tap.

1                   15. An XDSL system comprising:  
2 a hybrid circuit in operative communication with a  
3 transmission line and an XDSL modem associated with a subscriber  
4 premises, said hybrid circuit comprising a plurality of selectable impedance  
5 circuits;  
6 a switch for connecting each of said plurality of selectable  
7 impedance circuits in-line with said XDSL modem and said transmission  
8 line in response to a control signal; and  
9 a controller programmed to determine a performance  
10 characteristic associated with each of said plurality of selectable impedance  
11 circuits when connected, and output said control signal as a function of  
12 said performance characteristics associated with each of said impedance  
13 circuits.

1                   16. The XDSL system of claim 15 wherein the number of  
2 impedance circuits is four.

1                    17. The XDSL system of claim 15 wherein said  
2 performance characteristic is a transmission data rate.

1                    18. The XDSL system of claim 15 wherein said  
2 performance characteristic is a transmission line attenuation.

1                    19. The XDSL system of claim 15 wherein said  
2 performance characteristic is a noise margin.

1                    20. The XDSL system of claim 15 wherein one of the  
2 plurality of impedance circuits comprises a 460 ohm resistor in parallel  
3 with a 1200 ohm resistor and 520 pF capacitor.